REMARKS/ARGUMENTS

The Examiner is thanked for the review of the application.

Claims 1-19 remain in this application. Claims 1-5, 8-14, and 17-19 have been amended.
No Claims have been added. No new matter has been added.

In the Office Action dated August 10, 2006, the Examiner rejected Claims 1, 3-4, 10-11, and
13-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out
and distinctly claim the subject matter which applicant regards as the invention. Regarding this
rejection the Examiner has stated that "claim 1, line 4; claim 3, line 2; claim 4, lines 6 and 9, claim
10, lines 9 and 16; claim 11, lines 4 and 5; claim 13, lines 6, 9, and 16, and claim 19, lines 9 and 16,
the applicant uses the claim language 'allow(s)' and/or 'allowing' which is indefinite. The examiner
is able to determine what the applicant is actually claiming. Claim 11 recites the limitation 'the
prioritization' in line 4. There is insufficient antecedent basis for this limitation in the claim.
Claims 14 and 17, respectively, recite the limitation 'the change' in line 2. There is insufficient
antecedent basis for this limitation in the claim. Claims 15 and 16, respectively, recites the
limitation 'the change' in line 1. There is insufficient antecedent basis for this limitation in the
claim. Claim 18 recites the limitation 'the difference' in line 2. There is insufficient antecedent
basis for this limitation in the claim."

Base Claim 1 has been amended to include "An apparatus for computing a preferred set of
prices for a plurality of products, comprising an optimization engine comprising computer readable
media, comprising: computer readable code for storing a plurality of rules; computer readable code
for prioritizing the plurality of rules; computer readable code for incrementally relaxing at least one
lower priority rule to enable a higher priority infeasible rule to become feasible; and computer
readable code for performing an optimization process, utilizing Bayesian shrinkage modeling, to
generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules

wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products." (Emphasis added). Support can be found on page 60, lines 18 and 19 of the specification as filed, which states "The mixed model methodology is also referred to as 'Bayesian Shrinkage' Modeling…"

Dependent Claim 3 has been amended to include "The apparatus, as recited in claim 2, further comprising a support tool <u>configured to enable</u> a user to edit the plurality of rules and <u>prioritize</u> the plurality of rules." (Emphasis added). Support can be found on page 97, lines 7-9 of the specification as filed, which states "The support tool 116 comprises a rule editor 412 and an output display 416."

Dependent Claim 4 has been amended to include "The apparatus, as recited in claim 3, wherein the computer readable code for relaxing at least one lower priority rule, comprises: computer readable code for determining a priority of a rule determined to be infeasible; computer readable code for determining a lowest priority infeasible rule; computer readable code for determining if at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule may be relaxed to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become feasible; and computer readable code for incrementally relaxing at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become feasible, wherein incrementally relaxing said at least one rule comprises: prioritizing each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule; and sequentially relaxing in order of priority from lowest priority to highest priority each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to a point that allows said lowest priority infeasible rule to become feasible, wherein each said rule is relaxed incrementally in sequence until said point is reached." (Emphasis added). Support can be found on page 125, lines 8-16 of the specification as filed, which states "If at least one rule is found to be infeasible, the lowest priority infeasible (LPI) rule is found

… then these rules with lower priorities are relaxed incrementally so that the LPI rule becomes feasible (step 2120)."

Dependent Claim 5 has been amended to include "The apparatus, as recited in claim 4, wherein at least one of the plurality of rules is a gross margin rule, which defines a constraint on gross margin <u>changes</u>." (Emphasis added). Support can be found on page 123, line 15 of the specification as filed, which states "A gross margin rule provides a constraint on the change of a mark up."

Dependent Claim 8 has been amended to include "The apparatus, as recited in claim 4, wherein at least one of the plurality of rules is a store level volume rule, which defines a constraint on volume of sales <u>changes</u> at a store level." (Emphasis added). Support can be found on page 124, line 4 and 5 of the specification as filed, which states "The volume rule may provide a constraint on the change of volume of sales…"

Dependent Claim 9 has been amended to include "The apparatus, as recited in claim 4, wherein at least one of the plurality of rules is a competition rule, which provides a constraint on ~~the~~ difference between at least one competitor's prices <u>and the preferred set of prices</u>." (Emphasis added). Support can be found on page 124, line 9 and 10 of the specification as filed, which states "A competition rule provides a constraint on the difference between a competing store's prices."

Dependent Claim 10 has been amended to include "The apparatus, as recited in claim 1, wherein the computer readable code for relaxing at least one lower priority rule, comprises: computer readable code for determining a priority of a rule determined to be infeasible; computer readable code for determining a lowest priority infeasible rule; computer readable code for determining if at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule may be relaxed to allow the rule determined to be the lowest priority infeasible rule to become feasible; and computer readable code for incrementally relaxing at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become

FILED VIA EFS

feasible, wherein incrementally relaxing said at least one rule comprises: prioritizing each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule; and sequentially relaxing in order of priority from lowest priority to highest priority each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to a point that <u>enables</u> said lowest priority infeasible rule to become feasible, wherein each said rule is relaxed incrementally in sequence until said point is reached." (Emphasis added). Support can be found on page 125, lines 8-16 of the specification as filed, which states "If at least one rule is found to be infeasible, the lowest priority infeasible (LPI) rule is found … then these rules with lower priorities are relaxed incrementally so that the LPI rule becomes feasible (step 2120)."

Base Claim 11 has been amended to include "A method for computing a preferred set of prices for a plurality of products, comprising generating a preferred set of prices, comprising: storing a plurality of rules; <u>prioritizing</u> the plurality of rules; incrementally relaxing at least one lower priority rule to <u>enable</u> higher priority <u>infeasible</u> rules to become feasible; and performing an optimization process, <u>utilizing Bayesian shrinkage modeling,</u> to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products." (Emphasis added). Support can be found on page 60, lines 18 and 19 of the specification as filed, which states "The mixed model methodology is also referred to as 'Bayesian Shrinkage' Modeling…"

Dependent Claim 13 has been amended to include "The method, as recited in claim 12, wherein the relaxing at least one lower priority rule, comprises: determining a priority of a rule determined to be infeasible; determining a lowest priority infeasible rule; determining if at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule may be relaxed to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become feasible; and incrementally relaxing at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to <u>enable</u> the rule determined to be the

FILED VIA EFS

lowest priority infeasible rule to become feasible, wherein incrementally relaxing said at least one rule comprises: prioritizing each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule; and sequentially relaxing in order of priority from lowest priority to highest priority each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to a point that <u>enables</u> said lowest priority infeasible rule to become feasible, wherein each said rule is relaxed incrementally in sequence until said point is reached." (Emphasis added). Support can be found on page 125, lines 8-16 of the specification as filed, which states "If at least one rule is found to be infeasible, the lowest priority infeasible (LPI) rule is found … then these rules with lower priorities are relaxed incrementally so that the LPI rule becomes feasible (step 2120)."

Dependent Claim 14 has been amended to include "The method, as recited in claim 13, wherein at least one of the plurality of rules is a gross margin rule, which defines a constraint on gross margin <u>changes</u>." (Emphasis added). Support can be found on page 123, line 15 of the specification as filed, which states "A gross margin rule provides a constraint on the change of a mark up."

Dependent Claim 17 has been amended to include "The method, as recited in claim 13, wherein at least one of the plurality of rules is a store level volume rule, which defines a constraint on <u>changes</u> of volume of sales at a store level." (Emphasis added). Support can be found on page 124, line 4 and 5 of the specification as filed, which states "The volume rule may provide a constraint on the change of volume of sales…"

Dependent Claim 18 has been amended to include "The method, as recited in claim 13, wherein at least one of the plurality of rules is a competition rule, which provides a constraint on difference between at least one competitor's prices <u>and the preferred set of prices</u>." (Emphasis added). Support can be found on page 124, line 9 and 10 of the specification as filed, which states "A competition rule provides a constraint on the difference between a competing store's prices."

FILED VIA EFS

Dependent Claim 19 has been amended to include "The method, as recited in claim 11, wherein the relaxing at least one lower priority rule, comprises: determining a priority of a rule determined to be infeasible; determining a lowest priority infeasible rule; determining if at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule may be relaxed to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become feasible; and incrementally relaxing at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to <u>enable</u> the rule determined to be the lowest priority infeasible rule to become feasible, wherein incrementally relaxing said at least one rule comprises: prioritizing each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule; and sequentially relaxing in order of priority from lowest priority to highest priority each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to a point that <u>enables</u> said lowest priority infeasible rule to become feasible, wherein each said rule is relaxed incrementally in sequence until said point is reached." (Emphasis added). Support can be found on page 125, lines 8-16 of the specification as filed, which states "If at least one rule is found to be infeasible, the lowest priority infeasible (LPI) rule is found … then these rules with lower priorities are relaxed incrementally so that the LPI rule becomes feasible (step 2120)."

In the same Office Action the Examiner has also rejected Claims 1 and 11 under 35 U.S.C. 103(a) as being unpatentable over by Damian et al. (US 5,212,791), in view of Parunak et al. (US Patent Number 6,536,935).

Regarding Claims 1 and 11, the Examiner has stated that "Damian et al. discloses computer readable code for … however, Damian et al. do not expressly disclose a *computer readable code for performing an optimization process to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products.* Parunak et al. disclose that product design or

manufacturing planning and scheduling are exemplary of a constraint optimization problem in which the various components must agree on the shared variables in which they are interested, subject to the objective of producing a design or manufacturing process that will optimize the profitability of the overall system; and the details of designing/manufacturing affect at least two aspects of this objective: the cost of designing/manufacturing and the price the customer will pay. For many applications, the best solution is the one that maximizes the amount by which the price the customer will pay exceeds the cost of designing/manufacturing (col. 5, lines 33-44); and in the preferred embodiment, three separate tests are applied to identify lack of overlap and provide information to the constraint agents that may help them close the gap: (Test 1) The price ranges specified by the constraint agents may not overlap, (Test 2) The constraint agents may have opposing preferences for different alternatives; and (Test 3) Some alternatives may not be directly comparable in the price DAG from one or another of the negotiating constraint agents (col. 22, line 22-col. 23, line 27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Damian et al. to include the feature of Parunak et al. in order to use various scenarios to maximize profits." (Emphasis added).

It is respectfully submitted that Damian '791 relates to production scheduling and "more particularly to a technique for employing a knowledge base system to dynamically schedule production of parts on a plurality of manufacturing machines." (Col. 1, lines 11-14). In particular, the Damian '791 discloses "a method for operating a computer system to generate schedules for a plurality of orders." (Col. 2, lines 23-24, and Col. 107, lines 37-38). Damian '791 is unrelated to the price optimization systems of the instant invention and is thereby non-analogous art.

Only references from arts analogous to that of the claimed invention may comprise prior art to the invention. A reference will be analogous art if: 1) it is from the same field of endeavor as the claimed invention; or 2) it is from a different field of endeavor, but the reference is reasonably pertinent to the particular problem solved by the inventor. *In re Oetiker,* 977 F.2d 1443, 1446-47.

The field of endeavor of the instant invention concerns price optimization in an enterprise pricing environment. In particular, the instant invention relates to providing optimized prices for a

plurality of products and stores. (See Specification, page 2, lines 16-17). The cited art relates to production scheduling. The stated field relates to "a technique for employing a knowledge base system to dynamically schedule production of parts[.]" (Col. 1, lines 10-13).

Not only is Damian '791 from an unrelated field of endeavor, but it is not pertinent to the problem solved by the instant invention. The instant invention provides the advantage of allowing a user to optimize prices within the context of selected business rules. (See Specification, page 123, lines 12-14). The invention allows the user to relax lower priority rules incrementally in order to optimize pricing when optimization is otherwise unfeasible. This solves the problem of having optimized prices which are infeasible given the chosen rules by optimizing the process of rule relaxation to produce a feasible result. Damian '791, on the other hand, relates to scheduling adjustments given "operational constraints due to the nature of the equipment" and clearly rejects optimization as a goal. (Col. 1, lines 67-68, and Col. 10, lines 63-65).

Since Damian '791 is non-analogous art, it is not available as prior art over the instant invention. As such, Claims 1 and 11 are allowable as amended.

Even if Damian '791 were analogous art, the instant invention would be allowable over Damian '791 in conjunction with Parunak et al. '935 for at least the reasons mentioned below.

It is respectfully submitted that Parunak et al. '935 does not teach or suggest "performing an optimization process to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product price generated for said plurality of products" in the manner claimed in Claims 1 and 11. Parunak '935 discloses making "Assignments to attributes (e.g., electrical power or overall dimensional size) of components within the system … [to] produce higher utility and lower cost." (Abstract, lines 1-14). A purpose of Parunak '935 is to maximize the difference between "cost of designing/manufacturing and the price the customer will pay" as stated by the Examiner. (Emphasis added). This appears to equate to maximizing profit for a singular and **isolated product design or manufacturing process**. Parunak

'935 does not, however, disclose optimizing a "<u>preferred set of prices</u>" for a "<u>**plurality of products**</u>" in the manner asserted.

Additionally, the tests of Parunak '935 stated by the Examiner are useful in the determination of a "lack of overlap" within "buy-sell aggregate curves" to determine when the disclosed system should "interact with entities (e.g. humans)." (Col. 9, lines 57-65, Col. 22, lines 20-24, 33-37 and 63-65). It appears that the stated tests are not related to computing a preferred set of prices, but rather detailing when human intervention is required in the system.

Furthermore, Parunak '935 is not combinable as a matter of art with Damian '791. Damian '791 provides a method for determining a feasible solution, but appears to avoid optimization: "Note that this program does **not** have an optimum schedule criteria, therefore it is picking the first acceptable schedule. This prevents the necessity of considering all possible combinations which could prove very costly." (Emphasis added). (Col. 10, lines 63-65). Parunak '935, on the other hand, determines "assignments based upon constraint optimization techniques." (Col. 1, lines 8-11). As such, Damian '791 and Parunak '935 have goals that are very different from one another. With such a fundamental difference of methodology, it is clear that these two systems are mutually exclusive methods and thus not combinable. It may be additionally argued that Damian '791 does not teach or suggest any combination with an optimization system such as Parunak '935.

Lastly, Claim 1 has been amended to recite in relevant part "computer readable code for performing an optimization process, <u>utilizing Bayesian shrinkage modeling,</u> to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products." (Emphasis added). Similarly, Claim 11 has been amended to recite in relevant part "performing an optimization process, <u>utilizing Bayesian shrinkage modeling,</u> to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products." Support can be found on

page 60 lines 18-20 of the Specification as filed, which states "The mixed model methodology is also referred to as 'Bayesian Shrinkage' Modeling, because by combining data from various stores and/or products, one can "shrink" individual parameter estimates…" As such, Applicants respectfully traverse the rejection of Claims 1 and 11.

The Examiner also rejected Claims 2-4, 10, 12, 13, 19, 20 under 35 U.S.C. 103(a) as being unpatentable over Damian et al. (5,212,791) in view of Parunak et al. as applied to claim 1 above, and further in view of Ouimet et al. (US Patent Number 6,094,641), still in further view of Herz et al. (US PG Pub. 2001/0014868).

Regarding Claims 2 and 12, the Examiner has stated that "Damian et al. fails to disclose the following, but does disclose a production scheduling system that implements dynamic scheduling for products in the abstract, lines 1-5. However, Ouimet et al. discloses an econometric engine for modeling sales as a function of price to create a sales model/creating a sales model, (col. 4, lines 35-44, demand model gives predicted sales of an item based on price); a financial model engine for modeling costs to create an activity based cost Model/creating an activity based cost model, wherein the generating a preferred set of prices uses information from the creation of the sales model and the creation of the cost model (col. 4, lines 52-53, (pricing model), which includes an activity-based cost model since the prices are determined for sales, in this case the activity is selling (col. 2, lines 1-12), including visibility, and taking the promotional cost into account when modifying the demand model, in this case, the module is inherent with Ouimet since Ouimet's system is computer-implemented and in order to create models, a module is necessary in a computerized system); and wherein the optimization engine is coupled to the econometric engine and financial model engine to receive input from the econometric engine and financial model engine, wherein the optimization engine generates the preferred set of prices, (col. 5, lines 45-48, [using fitted, modified demand model to determine price that will maximize profits, {optimization}]). Ouimet et al. discloses this limitation in analogous art for the purpose of showing how products can be implemented in models. Herz et al. disclose that in mathematical terms, profit=q(V,X) po (V,X)=quantity sold times profit, where profit, n, is a known function of the shopper, V, and offer, X, and the quantity sold, q, is a

function which needs to be estimated. Once one has estimated q (V,X) by clustering similar

shoppers and offers together (as described above) and using the expectation that similar shoppers

will buy similar quantities of similar offers, then profit can be maximized directly by the obvious

method of seeing what V and X make the profit largest (paragraph [0240]). Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the applicant's invention to

include the features of Herz et al. in order to implement an econometric engine, a financial model

engine and an optimization engine with the motivation of ultimately optimizing prices."

Since Damian '791 is non-analogous art as aforementioned, it is not available as prior art

over the instant invention. As such, Claims 2 and 12 are allowable as amended.

Even if Damian '791 were analogous art, the instant invention would be allowable over

Damian '791 in conjunction with Ouimet et al. '641 and Herz for at least the reasons mentioned

below.

Ouimet et al. '641 does not teach or suggest grouping a plurality of <u>highly substitutable</u>

<u>products into demand groups</u> which can then be used in a sales model to predict demand for the

entire group. In Ouimet '641, a system of coupled equations is used to describe the demand for each

item (or product) in a given group. (Col. 4, lines 35-47). The instant invention may advantageously

be used to group highly substitutable products into demand groups to help solve the problem, inter

alia, of forecasting demand for large numbers of products which are interrelated.

Moreover, it is respectfully submitted that Herz does not teach or suggest clustering "said

plurality of products into demand groups <u>of related products whereby each said demand group is</u>

<u>made up of highly substitutable related products,</u> further wherein said sales model models demand

group sales" as claimed in Claims 2 and 12. (Emphasis added). Contrary, Herz is primarily

concerned with "clustering similar shoppers and offers" together, not clustering similar products into

demand groups. (paragraph [0240]). While 'offers' includes product information, this grouping

appears to be dictated by shopper reactions to the offers rather than the level of product

substitutability. (paragraph [0240]). Additionally, "offers" includes "the contractual terms of an

offer … together with the details of the presentation of that offer to the second party, including any surrounding or accompanying product information or advertising material conveyed by such means as text sound or graphical images are collectively termed 'offer'." (paragraph [0019]). Thus, it may be seen that the product is but a minor component of 'offer', and as such 'offer' clusters are extremely attenuated from a demand group as claimed in Claims 2 and 12. Thus, Applicants submit that Herz fails to overcome the previously added limitation of <u>clustering substitutable products into a demand group</u>.

Furthermore, Claim 2 has been amended to recite in relevant part "a financial model engine for modeling costs to create an activity based cost model, <u>wherein said cost model includes fixed costs and variable costs, and</u> wherein the optimization engine is coupled to the econometric engine and financial model engine to receive input from the econometric engine and financial model engine and, wherein the optimization engine generates the preferred set of prices." (Emphasis added). Similarly, Claim 12 has been amended to recite in relevant part "creating an activity based cost model, wherein the generating a preferred set of prices uses information from the creation of the sales model and the creation of the cost model<u>, and wherein said cost model includes fixed costs and variable costs</u>." (Emphasis added). Support may be found on page 75, lines 1-3 of the Specification as filed which states "variable cost components where the cost of an item is a function of the amount of sales of the item and fixed cost components where the cost of an item is not a function of the amount of sales of the item." As such, Applicants respectfully traverse the rejection of Claims 2 and 12.

Regarding Claims 4, 10, 13, and 19 the Examiner has stated that "Damian et al. discloses computer readable code for determining a priority of a rule determined to be infeasible/determining a priority of a rule determined to be infeasible/determining the lowest priority infeasible rule (col. 5, lines 46-47, using computer scheduler to determine when no feasible outcome is available, (col. 6, lines 21-31, shows lowest leveling hierarchy maintains the up-to-date status of each production resource, w/col. 108, lines 21-24, shows process is repeated to find feasible outcome, therefore the lowest level in the hierarch is repeatedly used to find feasible outcome); computer readable code for

determining a lowest priority infeasible rule, (col. 10, lines 5-8, shows an example of when a low priority rule becomes active, it picks a 'child' schedule just generated and uses it a 'parent' to generate further children, therefore the determination of the lowest priority rule is obvious since further children schedules are produced which are of lower priorities of the already low priority 'parent' schedule, and order to produce a lower priority schedule, the lowest priority schedule must be known in order for production to take place); computer readable code for determining if at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule may be related to allow the rule determined to be the lowest priority infeasible rule to become feasible; and computer readable code for relaxing at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to allow the rule determined to be the lowest priority infeasible rule to become feasible/determining if at least one rule with a lower priority than the priority of the rule determined to be infeasible/lowest priority infeasible rule may be relaxed to allow the rule determined to be infeasible to become feasible; relaxing at least one rule with a lower priority than the priority of the rule determined to be infeasible/lowest priority infeasible rule to allow the rule determined to be infeasible to become feasible, (col. 5, lines 47-48, obtaining feasible schedules, and easing constraints until an acceptable schedule is obtained); prioritizing each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule (col. 10, lines 5-35); and sequentially relaxing in order of priority from lowest priority to highest priority each said at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to become feasible, wherein each said rule is relaxed incrementally in sequence until said point is reached (col. 6, lines 6-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine a lowest priority infeasible rule with the motivation of using this lower priority rule to produce the lowest priority schedules."

Since Damian '791 is non-analogous art as aforementioned, it is not available as prior art over the instant invention. As such, Claims 4, 10, 13 and 19 are allowable.

FILED VIA EFS

Even if Damian '791 were analogous art, the instant invention would be allowable over Damian '791 for at least the reasons mentioned below.

Applicants respectfully submit that Damian '791 does not disclose or suggest incrementally relaxing rules in order to allow an infeasible rule to become feasible. Damian '791 simply replaces unworkable schedules with workable schedules on a hierarchical basis. Damian '791 appears to refer to "rules" in the specification ambiguously as meaning both "equipment criteria" supplied by the customer and static functionality modules (computer code) that make up the claimed invention. (Col. 4, lines 56-58 and Col. 20, line 5-65). In view of the present invention, the equipment criteria most closely resemble the kind of rules in question. However, Damian '791 does not prioritize rules in its own right; "hard" versus "soft" rules appear to be input by the customer in Damian '791. (Col. 5, lines 63-68, Col. 7, lines 60-63, and Col. 9, lines 60-64). Applicants, suggest that inputting logical rules into one of two categories is far different than the prioritization as asserted, which ranks rules in relation to one another hierarchically. See Specification page 126, lines 2-6. Additionally, if the formed "schedule is found to violate a particular condition" a counter is kept, and the schedule is discarded once the counter reaches a threshold value. (Col. 10, lines 14-21). Thus, it appears the only way for Damian '791 to "relax" the conditions is to increase the threshold, which may be done by a user. (Col. 3, lines 1-10). Thus, it appears that the increasing the error threshold of Damian '791 is simply allowing <u>a greater range of error in the output</u>, as opposed to sacrificing particular lower priority rules in order to "<u>incrementally relax[]</u> at least one rule with a lower priority than the priority of the rule determined to be the lowest priority infeasible rule to enable the rule determined to be the <u>lowest priority infeasible rule to become feasible</u>" as recited by Claims 4, 10, 13 and 19. (Emphasis added). The present system sacrifices a lower priority rule to make higher priority rules feasible, whereas Damian '791 simply allows for a semi-adjustable margin of error. (Col. 3, lines 1-10). As such, Applicants respectfully traverse the rejection of Claims 4, 10, 13, and 19.

The Examiner has also rejected Claims 5-9 and 14-18 under 35 U.S.C. 103(a) as being unpatentable over Damian et al. (5,212,791) as applied to claim 1 above, and further in view of Ouimet et al. (6,094,641), and still in further view of Ouimet et al. (6,308,162). In light of the

amendments to Claims 1 and 11 outlined above, dependent claims 5-9 and 14-18 are believed to be allowable for at least the same reasons as those discussed above.

In sum, base Claims 1 and 11 have been amended and are now believed to be allowable. Dependent Claims 2-5, 8-10, 12-14, 17-19 have been amended and are now believed to be allowable. Dependent Claims 6, 7, 15 and 16 which depend therefrom are also believed to be allowable as being dependent from their respective patentable parent Claims 1 and 11 for at least the same reasons. Hence, Examiner's rejection of dependent claims is rendered moot in view of the amendment to independent Claims 1 and 11. No new claims have been added. Applicants believe that all pending Claims 1-19 are now allowable over the cited art and are also in allowable form and respectfully request a Notice of Allowance for this application from the Examiner.

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Applicants hereby petitions for a two-month extension of time within which to respond to the referenced Office Action and have authorized the commissioner via EFS to charge our Credit Card in the amount of $450.00 to cover the necessary fee. The commissioner is authorized to charge any additional fees that may be due to our Deposit Account No. 50-2766 (Order No. DEM1P007). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

LAW OFFICES OF KANG S. LIM
PMB 436
3494 Camino Tassajara Road
Danville, CA 94506
Voice: (925) 570 8198
Facsimile: (925) 736 3974

Respectfully submitted,

/Kang S. Lim/

Kang S. Lim
Attorney for Applicant(s)
Reg. No. 37,491

CUSTOMER NO. 36088

FILED VIA EFS